






| APPLICABLE STANDARD  |   |   |             |  |   |            |
|--|---|---|-------------|--|---|------------|
| Rating   | Operating Temperature Range  | -55 °C to 105 °C <sup>(1)</sup>   |             | Storage Temperature Range  | -10 °C to 60 °C <sup>(2)</sup>  |            |
|  | Voltage   | Signal Contact : 50 V AC<br>Power Contact : 200 V AC  |             | Storage Humidity Range   | Relative humidity 85% max<br>(Not dewed)  |            |
|  | Current   | Signal Contact : 0.5 A<br>Power Contact : 3.0A  |             | Operating Humidity Range   |   |            |
| SPECIFICATIONS   |   |   |             |  |   |            |
| ITEM   |   | TEST METHOD   |             | REQUIREMENTS   | QT AT   |            |
| CONSTRUCTION   |   |   |             |  |   |            |
| General Examination  |   | Visually and by measuring instrument.   |             | According to drawing.  | x x   |            |
| Marking  |   | Confirmed visually.   |             |  | x x   |            |
| ELECTRIC CHARACTERISTICS   |   |   |             |  |   |            |
| Contact Resistance   |   | 100 mA(DC or 1000Hz)  |             | Signal Contact : 70m Ω MAX.<br>Power Contact : 20m Ω MAX.  | x —   |            |
| Insulation Resistance  |   | Signal Contact : 100 V DC.<br>Power Contact : 250 V DC  |             | Signal Contact : 100 MΩ MIN.<br>Power Contact : 1000 MΩ MIN.   | x —   |            |
| Voltage Proof  |   | Signal Contact : 150 V AC for 1 min.<br>Power Contact : 600 V AC for 1 min.   |             | No flashover or breakdown.   | x x<br>x —  |            |
| MECHANICAL CHARACTERISTICS   |   |   |             |  |   |            |
| Insertion and Withdrawal Forces  |   | Measured by applicable connector.   |             | Insertion Force: 9 N MAX.<br>Withdrawal Force: 1 N MIN.  | x —   |            |
| Mechanical Operation   |   | 100 times insertions and extractions.   |             | ① Contact Resistance:<br>Signal Contact : 80m Ω MAX.<br>Power Contact : 30m Ω MAX.<br>② No damage, crack and looseness of parts.                             | x —   |            |
| Vibration  |   | Frequency 10 to 55 to 10Hz, approx 5min<br>Single amplitude : 0.75 mm, 10 cycles<br>for 3 axial directions.                   |             | ① No electrical discontinuity of 1 μs.<br>② No damage, crack and looseness of parts.   | x —   |            |
| Shock  |   | 490 m/s <sup>2</sup> , duration of pulse 11 ms<br>at 3 times for 3 both axial directions.                                     |             |  | x —   |            |
| ENVIRONMENTAL CHARACTERISTICS  |   |   |             |  |   |            |
| Damp Heat (Steady state)   |   | Exposed at 40±2 °C, 90 ~ 95 %, 96 h.  |             | ① Contact Resistance:<br>Signal Contact : 80m Ω MAX.<br>Power Contact : 30m Ω MAX.   | x —   |            |
| Rapid Change of Temperature  |   | Temperature -55 → +85 °C<br>Time 30 → 30 min.<br>under 5 cycles.<br>(Relocation time to chamber : within 2~3 MIN)             |             | ② Insulation Resistance:<br>Signal Contact : 100 MΩ MIN.<br>Power Contact : 1000 MΩ MIN.<br>③ No damage, crack and looseness of parts.                       | x —   |            |
| Cold   |   | Exposed at -55°C, 96 h  |             | ① Contact Resistance:<br>Signal Contact : 80m Ω MAX.<br>Power Contact : 30m Ω MAX.   | x —   |            |
| Dry Heat    |   | Exposed at 105°C, 96 h  |             | ② No damage, crack and looseness of parts.   | x —   |            |
| Sulfur Dioxide   |   | Exposed at 25±2°C, 75±5%RH, 25 PPM for 96 h.<br>(Test standard: IEC 68)   |             | ① No defect such as corrosion which impairs the function of connector.<br>② Contact Resistance:<br>Signal Contact : 80m Ω MAX.<br>Power Contact : 30m Ω MAX. | x —   |            |
| Resistance to Soldering Heat   |   | 1)Reflow soldering :<br>Peak TMP : 260°C MAX<br>Reflow TMP: 220°C MIN for 60sec<br>2) Soldering irons : 360°C MAX. for 5 sec. |             | No deformation of case of excessive looseness of the terminal.   | x —   |            |
| Solderability  |   | Soldered at solder temperature<br>240±3°C for immersion duration, 3 sec.  |             | A new uniform coating of solder shall cover a minimum of 95 % of the surface being immersed.   | x —   |            |
|  | COUNT   | DESCRIPTION OF REVISIONS  | DESIGNED    | CHECKED  | DATE  |            |
|   | 2   | DIS-F-00002064  | TS. 00N0    | HT. YAMAGUCHI  | 17. 02. 02  |            |
| REMARKS <sup>(1)</sup> Include temperature rise caused by current-carrying.<br><sup>(2)</sup> "STORAGE" means a long-term storage state for the unused product before assembly to PCB. |   |   |             | APPROVED   | HS. OKAWA   | 14. 07. 18 |
|  |   |   |             | CHECKED  | KN. SHIBUYA   | 14. 07. 18 |
|  |   |   |             | DESIGNED   | TS. 00N0  | 14. 07. 17 |
|  |   |   |             | DRAWN  | TS. 00N0  | 14. 07. 17 |
| Unless otherwise specified, refer to IEC 60512.  |   |   |             |  |   |            |
| Note QT:Qualification Test AT:Assurance Test X:Applicable Test   |   |   | DRAWING NO. |  | ELC-353551-00-00  |            |
|   | SPECIFICATION SHEET   |   | PART NO.    | FX23-20S-0. 5SV  |   |            |
|  | HIROSE ELECTRIC CO., LTD.   |   | CODE NO.    | CL573-3201-0-00  |  1/1 |            |